DEC 1 5 1987

546 D GAO/NSIAD-85-104

BY THE U.S. GENERAL ACCOUNTING OFFICE

Report To The Honorable
George E. Brown, Jr.
House Of Representatives

Status Of The U.S. Antisatellite Program

This report provides current cost, schedule, and testing information on the U.S. antisatellite program. DOD is currently reassessing the program.

COMPLETED
6

ORIGINAL

GAO/NSIAD-85-104
JUNE 14, 1985

6 M 1

Request for copies of GAO reports should be sent to:

U.S. General Accounting Office
Document Handling and Information
Services Facility
P.O. Box 6015
Gaithersburg, Md. 20877

Telephone (202) 275-6241

The first five copies of individual reports are free of charge. Additional copies of bound audit reports are $3.25 each. Additional copies of unbound report (i.e., letter reports) and most other publications are $1.00 each. There will be a 25% discount on all orders for 100 or more copies mailed to a single address. Sales orders must be prepaid on a cash, check, or money order basis. Check should be made out to the "Superintendent of Documents".

UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

NATIONAL SECURITY AND
INTERNATIONAL AFFAIRS DIVISION

B-219105

The Honorable George E. Brown, Jr.
House of Representatives

Dear Mr. Brown:

On June 4, 1985, you asked us to provide current cost, schedule, and testing information on the U.S. Antisatellite (ASAT) program. The information presented below is extracted from documents obtained and discussions held during our ongoing field work conducted primarily at the U.S. Air Force Space Division in El Segundo, California, and U.S. Air Force Headquarters in Washington, D.C. We did not obtain official agency comments on this report; however, we did discuss the report with Department of Defense (DOD) officials. Our audit was conducted in accordance with generally accepted government auditing standards and was performed in April and May 1985.

In 1978 DOD directed the Air Force Space Division to produce an ASAT system.[1] The ASAT mission is to destroy specified low altitude Soviet satellites. The ASAT weapon is comprised of a two-stage missile and a miniature homing vehicle. The ASAT would be launched from an Air Force F-15 fighter plane into space. The miniature homing vehicle would maneuver into the satellite's orbit and destroy it by direct impact.

COST AND SCHEDULE ESTIMATES

DOD currently estimates the cost of the ASAT program at $4.1 billion. This information was reported to the Congress in the December 31, 1984, ASAT Selected Acquisition Report and subsequently by a DOD official in testimony before the

---

[1]Additional background information on the ASAT system is contained in our January 27, 1983, report entitled U.S. Antisatellite Program Needs A Fresh Look (GAO/C-MASAD-83-5) and in the May 30, 1985, issue brief of the Congressional Research Service (IB81123).

Subcommittee on Defense, House Committee on Appropriations, on April 18, 1985. The hearing disclosed that the program cost estimate had increased from the prior year's estimate of $3.9 billion. These estimates were as follows:

	ASAT program costs estimates	
	1985 budget	1986 budget
	----------(billions)----------	
Development	$1.35	$1.40
Procurement	2.50	2.64
Military construction	.04	.04
Total	$3.89	$4.08

In addition to the increase in the estimated program cost, the Selected Acquisition Report and the testimony show that key program milestones have slipped in the past year and a half. For example, the Initial Operational Capability date and the Full Operational Capability date have both slipped 1 year. Air Force officials said that the slippage is partially the result of congressional actions on the fiscal years 1984 and 1985 appropriations. In fiscal year 1984 the Congress withheld funding for advanced procurement until it received a report from the President stating the actions he was going to take in the area of ASAT arms control. They said this delayed the award of contracts for long-lead parts from January 1984 to June 1984 which caused the Initial Operational Capability date to slip.

Indicators point to a further increase in program costs and further slippage in the program schedule. For example, according to the testimony, the ASAT program office has received some larger than expected production cost estimates from the ASAT contractor. The fiscal year 1986 Research, Development, Test, and Evaluation Descriptive Summary, as well as the above cited testimony, state that the fiscal year 1986 DOD budget request for ASAT missile procurement will probably buy fewer missiles than originally planned. This could either increase program costs or reduce the number of missiles to be produced. If the production program is stretched out, the present Full Operational Capability date could be delayed.

As a result of the larger than expected production cost estimates from the ASAT contractor, the ASAT program office has developed a new estimate of program costs. The Air Force is conducting an independent cost analysis of the program office's estimate that is scheduled for completion by mid-summer 1985 according to the April 18 testimony.

TESTING

The Air Force plans to hold 12 flight tests of the ASAT system. Two of the 12 tests have been held--the first in January 1984 and the second in November 1984. The January test was targeted at a point in space to see if the missile could get the miniature homing vehicle there. The Air Force considered the test a success. It successfully demonstrated the proper functioning of the first and second stage propulsion systems and the missile guidance system.

The objective of the November 1984 test was to reaffirm the performance of the missile as demonstrated during the point-in-space test and to demonstrate the capability of a miniature homing vehicle to acquire and track an infrared-emitting body in a deep space background, in this case, a star. The Air Force considered the test a partial success.

An independent Air Force technical review group assessed the ASAT's mission readiness to perform the third flight test, scheduled for this summer. This will be the first attempt to intercept a target vehicle. On May 28, 1985, this group reported that it had a total of 30 technical concerns that needed to be resolved before conducting the third flight test. Of the 30 concerns, 14 are associated with the target vehicle and 16 are associated with the ASAT system. The review group assigned a level of risk to each technical concern to illustrate its potential impact on major mission objectives. The 30 technical concerns were categorized according to risk as follows.

Level of risk	Target vehicle	ASAT system	Total concerns
High	0	2	2
Medium	5	7	12
Low	9	7	16
Total	14	16	30

The review group recommended additional ASAT system testing, improved system engineering analyses and testing procedures, and remedial actions. The group also recommended additional testing to validate the flight worthiness of the target vehicle.

Air Force officials said that all of these concerns will be resolved prior to the third test. At the Mission Readiness Review on June 4, 1985, the Commander of the Air Force Systems Command's Space Division approved the technical readiness of the hardware for the third test.

The review group reported additional technical concerns with both the target vehicle and the ASAT system but stated that the program office could wait until after the third test to try to resolve them.

The overall assessment of the review group was that (1) the probability of accomplishing all major mission objectives is less than 50 percent and (2) the probability of accomplishing important developmental objectives is good. Air Force officials said there are no further reasonable actions that can be taken prior to the third test that would increase the 50 percent probability.

ASAT REASSESSMENT

According to Air Force officials, the Undersecretary of the Air Force on May 16, 1985, directed that a reassessment of the ASAT program be conducted. According to these same officials, the study, scheduled to be completed by late June 1985, will

--update the threat and determine whether the system under development meets the updated requirements,

--look for ways to improve the program,

--determine whether the Initial Operational Capability date needs to be adjusted, and

--determine the alternative courses of action for beginning production while continuing in the research and development phase of the program.

- - - - -

As arranged with your office, we plan no further distribution of this report until 10 days from its date of issuance unless you publicly announce its contents earlier. At that time, we will send copies to the Secretaries of Defense and the Air Force and other interested parties.

Sincerely yours,

Frank C Conahan

Frank C. Conahan
Director

(392088)